AMENDMENTS TO THE CLAIMS

1. (Currently amended) A polymeric composition comprising:

(a) a free-radical reactive polymer,

(b) a free-radical inducing species,

(c) a free radical trapping species having at least one trapping site and a thermally-reversible bond contribution site and being a hindered amine-derived stable organic free radical, and

(d) a complementary, thermally-reversible bond contributor,

wherein the free radical trapping species substantially suppresses degradation of the polymer in the presence of the free-radical inducing species and at a trapping site, being graftable onto the polymer after the polymer forms a free radical.

2. (Currently amended) The polymeric composition of Claim 1 wherein grafting the free-radical trapping species onto the polymer and forming a thermally-reversible bond between the free radical trapping species and the complementary, thermally-reversible bond contributor yields ~~the resulting polymer being~~ a rheology-modified polymer having a gel content as measured by cyclohexane extraction (ASTM 2765) of less than about 10 weight percent.

3. (Currently amended) The polymeric composition of Claim 1 wherein grafting the free-radical trapping species onto the polymer and forming a thermally-reversible bond between the free radical trapping species and the complementary, thermally-reversible bond contributor yields ~~the resulting polymer being~~ a rheology-modified polymer having a gel content as measured by cyclohexane extraction (ASTM 2765) of less than about an absolute 5 weight percent greater than the gel content of the base polymer.

4. (Currently amended) The polymeric composition of Claim 1 wherein grafting the free-radical trapping species onto the polymer and forming a thermally-reversible bond between the free radical trapping species and the complementary, thermally-reversible bond contributor yields ~~the resulting polymer being~~ a thermally-reversibly crosslinked polymer having a gel content as measured by cyclohexane extraction (ASTM 2765) of at least about 10 weight percent.

5. (Currently amended) The polymeric composition of Claim 1 wherein grafting the free-radical trapping species onto the polymer and forming a thermally-reversible bond between the free radical trapping species and the complementary, thermally-reversible bond contributor yields ~~the resulting polymer being~~ a thermally-reversibly crosslinked polymer having a gel content as measured by cyclohexane extraction (ASTM 2765) of at least about an absolute 5 weight percent greater than the gel content of the base polymer.

6. (Original) The polymeric composition of Claim 1 wherein the polymer is selected from the group consisting of butyl rubber, polyacrylate rubber, polyisobutene, propylene homopolymers, propylene copolymers, styrene/ butadiene/ styrene block copolymers, styrene/ ethylene/ butadiene/ styrene copolymers, polymers of vinyl aromatic monomers, vinyl chloride polymers, and blends thereof.

7. (Currently amended) A polymeric composition comprising:

(a) a free-radical degradable polymer being capable of forming free radicals when subjected to shear energy, heat or radiation,

(b) a free radical trapping species having at least one trapping site and a thermally-reversible bond contribution site and being a hindered amine-derived stable organic free radical, and

(c) a complementary, thermally-reversible bond contributor,

wherein the free radical trapping species (i) substantially suppresses degradation of the polymer when the polymer is subjected to shear energy, heat, or radiation and (ii) at a trapping site, being graftable onto the polymer after the polymer forms a free radical.

8. (Currently amended) A polymeric composition comprising:

(a) a free-radical reactive polymer,

(b) a free-radical inducing species,

(c) a free radical trapping species having at least one trapping site and a thermally-reversible bond contribution site and being a hindered amine-derived stable organic free radical, and

(d) a complementary, thermally-reversible bond contributor,

wherein the free radical trapping species substantially suppresses carbon-carbon crosslinking of the polymer in the presence of the free-radical inducing species and at a trapping site, being graftable onto the polymer after the polymer forms a free radical.

9. (Original) The polymeric composition of Claim 8 wherein the polymer is selected from the group consisting of acrylonitrile butadiene styrene rubber, chloroprene rubber, chlorosulfonated polyethylene rubber, ethylene/alpha-olefin copolymers, ethylene/diene copolymer, ethylene homopolymers, ethylene/propylene/diene monomers, ethylene/propylene rubbers, ethylene/styrene interpolymers, ethylene/unsaturated ester copolymers, fluoropolymers, halogenated polyethylenes, hydrogenated nitrile butadiene rubber, natural rubber, nitrile rubber, polybutadiene rubber, silicone rubber, styrene/butadiene rubber, styrene/ butadiene/ styrene block copolymers, styrene/ ethylene/ butadiene/ styrene copolymers, and blends thereof.

10. (Currently amended) A polymeric composition comprising:

(a) a free-radical reactive polymer being capable of forming free radicals when subjected to shear energy, heat or radiation,

(b) a free radical trapping species having at least one trapping site and a thermally-reversible bond contribution site and being a hindered amine-derived stable organic free radical, and

(c) a complementary, thermally-reversible bond contributor,

wherein the free radical trapping species (i) substantially suppresses carbon-carbon crosslinking of the polymer when the polymer is subjected to shear energy, heat, or radiation and (ii) at a trapping site, being graftable onto the polymer after the polymer forms a free radical.